

REMARKS

Claims 27-47 were rejected in an Office Action dated February 18, 2009. Claims 36 and 37 have been amended, support for which may be found in the "Detailed Description of the Invention." No new matter is deemed added by the instant amendments. Applicant respectfully requests reconsideration of the present application in view of the following remarks.

Rejections under 35 USC §112

Claims 36-37 stand rejected under 35 USC §112, 2nd paragraph. Applicant respectfully asserts that amendments to claims 35-37 render moot the rejection under this section. Applicants respectfully assert that in view of the Figures and examples, the claims would be understood by a skilled artisan. Removal of the rejection is therefore requested.

Rejections under 35 USC §103(a)

Claims 27-32 and 36-47 are rejected under 35 USC §103(a) as being unpatentable over Garbuio (US 3,925,916, hereinafter '916) in view of Smith et al. (US 5,877,100, hereinafter after '100). Applicant respectfully traverses the rejection.

The Office Action sets forth a table showing citations of what are deemed as pertinent portions of the references where the steps of Applicant's claimed methods are deemed disclosed or obvious. To summarize the table, '916 discloses a boot having an insulating structure that is contained within an envelope. However, '916 does not disclose the following claim elements

- (1) insulation mixture;
- (2) compressing the insulation mixture;
- (3) placing compressed insulation mixture into the envelope;
- (4) evacuating and sealing the envelope at reduced pressure;
- (5) shaping the flat sealed evacuated insulating structure to form a shaped structure;
- (6) the shaped insulating structure having the claimed thermal conductivity;
and
- (7) inserting a sealed shaped evacuated insulating structure into a boot.

US '100 is cited to remedy all of the deficiencies of '916. Specifically, it is stated that it would be obvious to use the insulation bodies of '100 in the invention of '916 motivated by the desire to provide excellent insulation. As Applicant's understand the Office Action, it is therefore stating that it would be obvious to substitute the entire insulating structure of '916 with that of '100. Applicant respectfully traverses the rejection for the following reasons.

Insufficient Objective Evidence Has Been Presented to Establish a Prima Facie Case of Obviousness

US '916 is directed to a material that provides mechanical protection to the foot. US '916 teaches that boot liners filled with a flowable pasty mass that is displaceable to adapt itself to the shape of a foot is known (col. 1, lines 18-20). Disadvantageously, it is stated that these liners are limited by their effectiveness in certain temperature ranges where the materials become too hard if the temperature is too low (col. 1, lines 22-26). The objective of '916 is to achieve a resilient insert having a material that is displaceable to the shape of a foot which overcomes these shortcomings. The result achieved is a flexible sheet made of a highly elastomeric core in the form of foam, having air in the interstices of the core that can shift under stress.

To modify '916 by substituting a thermally insulating vacuum panel of '100 for the flexible sheet material of '916 would change the essential features of '916 from mechanical protection to thermal insulation. The flexible structure of '916 has an elastomeric core with air in the interstices to maintain resiliency upon compression or stress, being conformable to the shape of a foot. US '100 is directed to a thermal insulation material in the form of an air-evacuated compressed panel to achieve low thermal conductivity with no disclosed or suggested resiliency or ability to conform. Substituting the resilient sheet of '916 with the compressed, evacuated structure of '100, would render '916 unfit for its intended purpose. US '916 teaches away from prior methods that result in a flowable mass that hardens in lower temperatures making the flowable mass ineffective for displacement or unable to adapt to the shape of a foot (col. 1, lines 18-20). Thus, one skilled in the art would have no motivation to substitute the resilient sheet material of '916 having a highly elastic core and air in the interstices of the core, with the flat evacuated panels of '100 which are not known to be resilient, and '916 teaches away from this modification.

Insufficient objective evidence has been provided to establish a prima facie case of obviousness that a skilled artisan would be motivated to combine these references in a manner that would fundamentally alter the objectives and teachings of '916.

Applicant asserts that the claimed invention is not merely the simple substitution of one known element for another, or the predictable use of prior art elements according to their established functions. Applicant strongly asserts that nowhere in the art, to Applicant's knowledge, has the claimed method been shown for incorporating the claimed evacuated, sealed panels having the claimed low thermal conductivity in apparel applications, such as boots. Also, a method for shaping the flat evacuated panels into a form insertable into apparel, such as the boots, has not been disclosed or suggested in any of the cited references. Traditional vacuum panels have been used for industrial applications such as buildings, refrigerators, and the like. Traditional panels are thought to be thick and stiff, and lacking sufficient durability to be suitable in apparel applications. Prior to the instant application it was not thought possible to make compressed insulation in an evacuated sealed envelope having sufficient flexibility for shaping into a shaped form to provide the insulating advantages to apparel applications. Rejections on obviousness grounds cannot be sustained by mere conclusory statements, instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. Where there is no objective evidence of the obviousness of the claimed method, and the claimed methods of insulating a boot were not disclosed or suggested by the art, removal of the rejection is proper.

All Elements of Independent Claim 1 Have Not Been Established by the Combination

Neither reference teach the steps of first, evacuating air from the envelope and sealing it to form a flat insulating structure and then, shaping the flat insulating structure into the form of a shaped insulating structure. US '916 does not teach shaping a flat structure comprising insulating material encased in a sealed gas impermeable envelope, and neither does '100. Applicant asserts that the claimed shaping step is different than the teaching of '100 at col. 11, lines 64-67, where the particulate composition of '100 is placed in a porous pouch and pressed into a desired shape prior to placement in a gas impermeable enclosure. Therefore,

'100 shaping takes place prior to evacuation and prior to forming a vacuum panel. Therefore, there is no teaching of the step of shaping a flat insulating structure after evacuation into the form of a shaped structure. There is no disclosure or suggestion in '100 of forming an evacuated flat insulating structure having sufficient flexibility to be shaped after evacuation.

Thus, all the elements of the method as claimed are not disclosed or suggested, and removal of the rejection is proper.

All Elements of Independent Claim 30 Have Not Been Established by the Combination

Applicant respectfully asserts that all elements of Independent claim 30 have not been met for the reasons set forth above for independent claim 1.

Additionally, Applicant respectfully asserts that '916 does not disclose or suggest the steps of: placing more than one section of structure material in a gas impermeable envelope; evacuating and sealing the envelope at reduced pressure; sealing the envelope between sections of the structure material within the envelope to provide flexibility to the flat insulating structure for shaping.

It is stated in the Office Action that '916 discloses more than one section of elastomeric foam (4 and 4a) placed inside of an air impermeable envelope. Applicant strongly disagrees. With regard to Figs. 3 and 4, element 4 is clearly shown between element 3, fabric. Element 4a is shown between elements 6, the thermoplastic layers that are fusion bonded to each other along seam 7 to form the envelope, that is overlain by fabric layers 3. Thus, only 4a, and not 4, is contained within the gas impermeable envelope defined by thermoplastic layers 6. Element 4 lies on the other side of seam 7 and therefore outside of the envelope (see Fig. 2). Thus, '916 clearly does not show more than one section of insulating material contained within the envelope and sealed between sections as required by Applicant's claim 30.

Applicant asserts the following:

- (1) neither reference discloses or suggests shaping a flat insulating structure within a sealed envelope into the form of a shaped insulating structure;
- (2) neither reference discloses or suggests incorporating more than one section of insulating material contained within an envelope;

- (3) neither reference discloses or suggests sealing between more than one section of insulating material within an envelope to facilitate shaping;
and
- (4) neither reference discloses or suggests inserting a shaped insulating structure into a boot.

Applicant asserts that where all elements of the claim have not been established by the combination of references, removal of the rejection is proper and required.

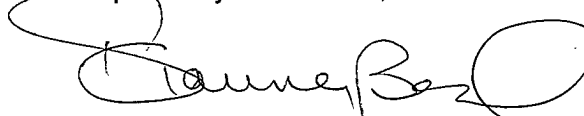
Double Patenting

Claims 27-47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-34 of copending Application No. 11/106,788. After all actions on the merits are resolved for the instant application, Applicant will consider filing a terminal disclaimer to overcome the obviousness rejection if it is deemed necessary.

Conclusion

For the foregoing reasons, the present invention as defined by the claims is neither taught nor suggested by any of the references of record. Accordingly, Applicant respectfully submits that these claims are now in form for allowance. If further questions remain, Applicant requests that the Examiner telephone Applicant's undersigned representative before issuing a further Office Action.

Respectfully submitted,



Dianne Burkhard, 41,650
W. L. Gore & Associates, Inc.
551 Paper Mill Road
P.O. Box 9206
Newark, DE 19714-9206
(302) 738-4880

Date: Aug. 13, 2009